A Review of Studies on TQM as a Strategy for Business Excellence

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ABSTRACT

Compulsion of competitive business environment is not merely to do well, but to do better than the competition. This challenging situation is compelling industries to opt for new strategies leading to superior performance: the goal of a TQM system. This call for rethinking and reworking of an organization's existing processes, position, posture and attitude with a view to transforming the organization to enable it to cope with the changing context of business, where customer is king. TQM provides the vehicle for change and transformation by making the organization more customers focused people driven, flexible and committed to continuous improvement.

These organizations are having new opportunities and challenges to grow much faster since the Government of India has implemented its new policies of liberalization, privatization and globalization. Many Indian organizations have started realizing the importance of Total Quality Management (TQM) and now quality system improvement standards. More and more organizations in the corporate arena are striving to obtain ISO 9000 accreditation and some of these have already go these standards.

The TQM concept refers to company wide quality assurance from supplier to customer using systems approach of documented sets of procedures and control of process variability in a team spirit with top management commitment. It involves strategic quality planning, goal setting, market research, design reviews and participation of senior management.

The paper concludes that TQM is not merely a system of quality management; it is a strategy that is designed to seek improvement in business performance by focusing on customers, empowering people, restructuring processes and leading the organization by vision and purpose.

INTRODUCTION

With the liberalization of Indian economy, the manufacturing and service sector is poised to face the rapidly growing competition from within and from outside. In the emerging struggle for survival, up gradation of Quality systems in line with the international standards has assumed a great importance. The challenge to a developing nation like India is to motivate its manufacturers and service providers to adopt and implement these standards, and to establish a credible national quality registration system which will be recognized and acceptable to its trading partners.

In the market place everyday new products or services are being introduced. The characteristic of market has become that of buyer's market. Today's buyer is a very discerning personality, who demands better products at lower price. To make this happen providers of products and services must improve quality. Therefore, market compulsions make it imperative upon manufacturer's to improve quality.

In today's quality oriented markets, battles for customers and market shares are being fought with 'quality' as prime weapon. Therefore, it is hardly surprising that quality is becoming significant factor in the business strategy planning process.

The main reason for giving quality as place of pride in business strategy is that the ensuring quality programme and activities provide major competitive advantages to the companies. Depending upon a company's strategic aim and its position in market, the corporate Total Quality Management abbreviated as TQM Policy is generated.

It is now being widely acknowledged that adaptation of global quality standards like ISO-9000 is the need of the hour for the Indian exporting companies. The strategic approach to facilitate ISO certifications is to develop, "Total Quality Management" in the organization in every area of operations. The quality concept has been there in Indian industry but restricted to manufacturing operations those too only control parts of it, there by excluding planning of quality across all departments.

Various research studies have suggested that customers are heavily influenced by 'Eight dimension' in determining quality levels.

(i) Performance: It refers to the primary operating features of a product,

(ii) Features: These are secondary qualities that supplement the product's basic functioning,

(iii) Reliability: The probability of a product's failing with in a specified period of time reflects reliabilities,

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(iv) Conformance with the degree to which a product's design and operating characteristics makes pre-established standards,

(v) Durability: It is a measure of product life, having both economic and technical dimensions,

(vi) Serviceability: It refers to speed, courtesy and competence of repair,

(vii) Aesthetics: It refers to as to how a product looks, feels, sounds etc,

Perceived Quality: It refers to assessment of standards relying on indirect measures when comparing product brands.

EVALUATION OF TQM AND ITS CONCEPTS

The most crucial breakthrough in the modern quality movement came in 1931 with the publication of Shewhart's article on "Economic control of Quality of manufactured product". Shewhart became the first "to recognize that variability was a fact of industrial life and that it could be understood and managed using the principles of probability and statistics" (Ishikawa, 1985). However, business interest in quality did not fully materialize until World War II in the U.S. and post World War II in Japan. In the early days of World War II, the department of defense used quality-sampling procedures to accept or reject munitions, thus causing defense suppliers to be more concerned with quality assurance (Garvin, 1998). But the modern roots of what we now call TQM originated around 1949 in Japan with the adoption, by a committee of the Union of Japanese Scientists and Engineers, of many of the statistical methods of Deming (Walton, 1986). Deming, a recognized scholar in the field of sampling is the one who introduced quality control to Japan through his visits in 1950, 1951 and 1952. Juran is credited to introduce TQM in Japan through his visit in 1954 (Gehani, 1992). Juran's Visit marked a transition in Japan's quality control activities from the dealing primarily with technology based in factories to and overall concern for the entire management. The Juran's visit created an atmosphere in which quality control (QC) was to be regarded as a tool of management, thus creating an opening for the establishment of total quality control (TQC) (Ishiikawa, 1985). Feigenbaum defined TQC through an article in Industrial Quality Control in May 1957. According to him, TQC requires participation of all divisions in an organization. But he felt that quality, which is everybody's job in an organization, could become nobody's job. He suggested that essentially quality control specialists should manage the quality function. But TQC advocated by Feigenbaum did not find wide application and hence did not become popular (Ganapathy et al., 1994). Japanese accepted the basic concept of Feigenbaum's theory of TQC however, the Japanese did not agree to this view that quality function may be managed by quality control specialists. The success of Japanese manufacturers during the 1960's and the 1970's, changed the emphasis from a quality control approach to a quality assurance approach leading to a greater number of business functions being involved in the management of quality, Success stories in Japan and its capturing of a larger share of world markets, paved a way for acceptance of quality in the United States and in Europe. Quality and its control became TWC as Feigenbaum called it in the 1960's and its management became TQM by the 1980's and 1990's.

Dale and Plunkett (1991) presented a hierarchy of quality management starting from inspection to quality control the quality assurance to total quality management. Zaire (1991) also identified the evolution of two extremes one, from control driven to culturally driven, and two, from controlling-in to managing-in quality. Miller (1993) however, mapped the evolution into four phases – Quality control, quality assurance, total quality management and quantum quality. Sallis (1996) depicted the evolution in terms of a sequential movement from inspection to TQM, through quality control and quality assurance. Kehoe (1996) identified three phase: (i) 1940's and 1950's – quality control phase; (ii) 1960's and 1970's – quality assurance phase; and (iii) 1980's and 1990's – total quality phase. Hermel (1997) remarked that the search for quality has been present in organizations for a long time and along the way, it has taken different forms varying with an evolving paradigm and conceptualization. He distinguished four great eras/periods, from the beginning of the century to the 1980's. He identified them as: (i) beginning of the century – inspection era; (ii) 1930's to 1950 – quality control era; (iii) 1950's to 1970 - quality assurance era; (iv) 1970's and onwards – total quality management era. This philosophy of TQM underlines the Malcolm Baldrige National Quality Award in the United States, the European Quality Award, the Australian Quality Award, and the Japanese Deming Prize.

Proponents of total quality management claim that TQM can be implemented in any organization and it can result into improved products and services, reduced costs, more satisfied customers and employees, and improved financial performance (Easton and Jarrell, 1998; Hendricks and Singhal, 1997). TQM has been accepted by both service and manufacturing organization globally, as a systematic management approach to meet the competitive and technological challenges. It redefines the quality with emphasis on top management commitment and customer satisfaction.

Finally, it can be said that, "to survive and thrive in the competitive business world of today and the surely more competitive world of tomorrow, we need all the management weapons we can get. One of our most potent will undoubtedly be Total Quality Management (TQM)". It's designed to get us ahead of the competition. It gives new and improved ways for insuring that our operations are efficient, profitable and productive. To enable us to conduct our organization, no matter what industry we have, no matter where we are positioned today. (Kelly, 2000)

BENEFITS OF TQM

The benefits of TQM can be classified into the following structure:

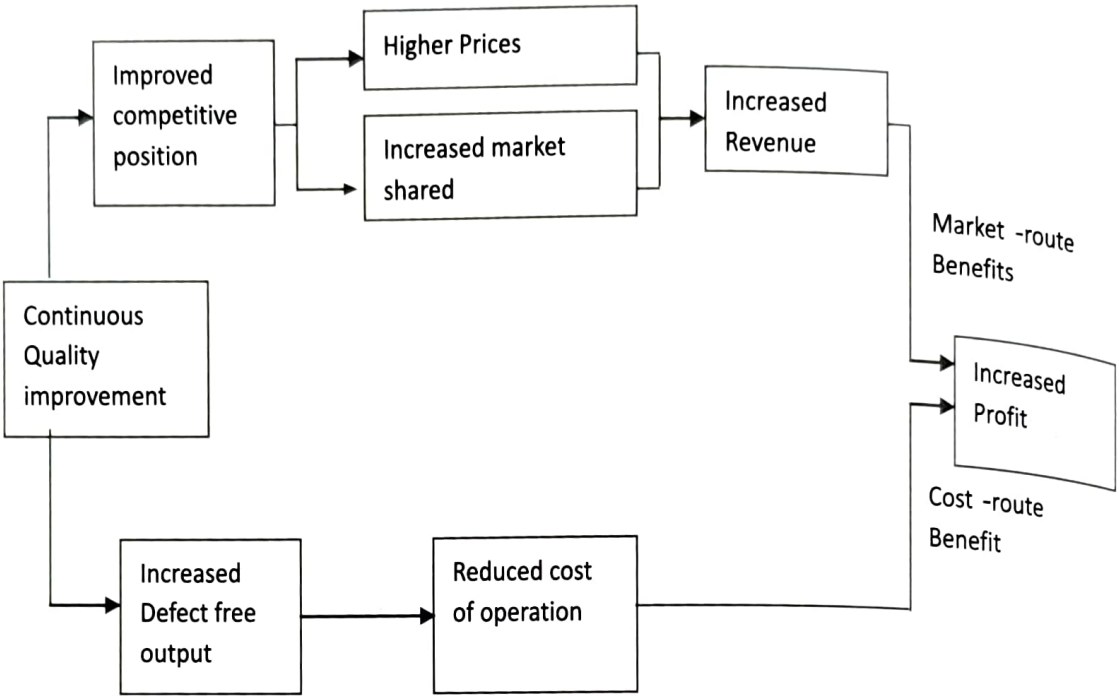

Fig.1 Benefits of TQM

(Source: Richard J. Shonberger, Edward M. Knod, Jr., Operation Management, 1998, P.54)

TQM PRACTICES IN INDIA

The generic quality standards such as ISO 9000 are applicable to any type of manufacturing or service industry and any size. Industry related standards such as COPC-2000, CMMi, etc., only relate to a particular industry. The CII, in collaboration with export and import bank of India, has instituted an award for business excellence in Indian organizations called the CII-EXIM bank award for business excellence. Similarly, the Tata Group has instituted the JRD Tata quality value Award for business excellence. Thus, these quality standards and business excellence models are paving the path for the Indian industry to have competitive advantage in the international market scenario.

Sharma et al (1995) reiterates that the consciousness of quality is permeating Indian organization. The authors mention that with more and more Liberalization, Privatization and Globalization, all manufacturers, both in the developed World as well as the developing World, are looking towards TQM as a management culture that can help them remain competitive. According to them, recent available figures suggest that the Indian economic growth is now clear of the reversionary trends that had characterized it in the early years of the 90s as evidence by the domestic measures of the wealth of the country, Gross domestic product (GDP) which in real terms has started showing an upward trend as also foreign investments into the country.

However, it may be noted that some large manufacturing organizations have adopted the TQM process as a positive change program for improvement focused on the principles of empowerment (Karkada, 1993), Team working (Chandrashekhar, 1995), Adaptation of TQM principles to local cultural demands (Chatterjee, 1990), to enable benefit on a continuing basis from a company-wide TQM program.

In the Indian context, it has been highlighted that the Indian industry is coming of age with a progressive reduction in the levels of protection, implying an orientation towards reducing costs of production and improving the quality of products and services. (Singh, 1995)

In India, the changing business environment is instilling a greater attention to issues of productivity improvement through improving the quality of products and services. (Singh, 1995) Traditionally the public sector organizations in Indian have been operating in a less Competitive environment protected by administered policies. (Jain, 1967, Jater, 1992) Asian Productive Organization (APO) and National Productivity Council, Indian undertook survey on quality management practices in 1993-94 and a research study in industry sector in 1996 with a view to identifying and analyzing corporate needs and practices on TQM. The study revealed that Total Quality Management (TQM) has made a great impact over the years in a number of Indian companies surveyed. While the effect of these practices is yet to make the mark on bottom line, the benefits are already perceptible in many aspects. Percentage of defects free cars has been gone up at Maruti from 15% to 35% in 1996 within 3 yrs, increase in customer orientation reflected through faster responsiveness etc. are some examples of TQM practice in the Indian organizations.

Gondhalkar et al (1991) have studied he behavioral aspects of productivity improvement through the application of TQM in

Godrej. The Godrej-Kaizen system was developed and its impact on attitudinal changes in the employees was studied. It was concluded that the Kaizen system drastically reduces resistance to change. In the same theme, Crompton Greaves Ltd. (CGL) is an electrical company. The company is currently embracing Total Quality Management. Indications are that TQM is beginning to make a difference even in the transformer group.

On the other hand, Rated on global scale of quality, India's performance has not been too satisfactory. Among the 41 countries whose products and services, which were ranked by the Geneva, based World economic forum (1994), India occupied the 28th place on the price to quality parameter. Similarly, India ranked 38th amongst 41 countries, as regards the practice of TQM. Finally, Japan ranked first on both parameters of price and quality and practice of TQM.

Bound (1994) findings have been that international competition and requirements for continuous improvement became an issue of importance in the 1980's in western countries and in the 1990's in the Indian organizations.

Sink (1991) stated that TQM efforts could be successful only if the leadership of the organization evolves the operational definition for the organizational system and it is crystallized and communicated with conviction and clarity. The study carried out by Singh (1991) revealed that very few companies were adopting TQM practices in India.

Chakarvarky (1994) stated that one needs quality mindset to achieve total quality. His report disapproved the existing approaches of TQM practices in India. Business Today (1995) reported the survey conducted by CII. This survey indicated the present scenario of TQM in India. The survey provided information on some of the common problems to implement TQM. The reasons for these problems have been identified as: lack of commitment by top management, lack of TQM strategy, lack of training and TQM skills, lack of updated technology and lack of desired motivation level in employees. Mohanty (1995) presented a number of India examples, where TQM has been implemented. He has identified the reasons for the relative success/ failure of many TQM programmes. Mohanty and Lakhe (1998) identified 18 critical success factors for TQM implementation based on survey of the Indian industry. These 18 critical factors are organized around four significant factors and incorporate holistic paradigm of TQM. These factors are proactive business orientation, internal support, competitive assessment and participatory orientation.

Motwani et al. (1994) conducted a study to identify the degree to which quality management practices were present in the Indian manufacturing organization. According to a survey conducted by CII among ISO 900 certified companies, 54 percent of the respondents stated that there had been an improvement in their product and process quality after obtaining certification (Business Today, 1995). A study by philipose and Venkateswalu (1980) indicated that only 24 percent of the organizations use some type of sampling plans. Indian organizations appreciated the necessity of effective leadership, customer focus, fast-response, proactive organizational culture, and employee involvement and development to achieve excellence (Ahluwalia, 1993).

Maheshwari and Zhao (1994) also assessed the status of quality management practices in India. The results of their study showed that the majority of the Indian companies are well aware of the modern quality management concepts and philosophies. Sharma (1997) presented an overview of TQM implementation in the Indian engineering industry. Agrawal (1999) developed a business excellence model for the Indian organizations based on MBNQA.

Malliga and Jayabalan (1999) considered ISO 9000 as a marketing tool and key to the European market. Rao et al. (1997) conducted a study to identify the triggers for quality management programmes in the Indian industries. The study showed that the main triggers for initiation of quality management programmes are due to increased competition (52%), demanding customers (43%), the need to reduce costs (31%) and survival of the company (16%). Ahluwalia (1996) provided a compendium of papers by Indian experts during 6th world congress on total quality. Gondhalekar et al. (1995) identified seven input variables, which are significant for steering TQM mission in the Indian organization. They stated these as cadre of the individual (higher the better), age (between 30 and 50 is better than extreme age), recognition (type of work), educational level (higher the better), and reading habits (good readers give more Kaizens).

Shah (1999) described TQM as a modern management philosophy and a journey, not a destination and implementation of TQM requires unwavering commitment of the organizational people, substantial time and effort and sweeping changes in organizational culture, attitudes and business practices. Ramamurthy (1999) suggested the following linking will help achieving the strategic quality management (SQM); regular exploitation of human knowledge, constant learning from failures, continuous customer feedback, monitoring of quality system, small group activity, quality circles, value engineering, in industrial engineering and suggestion schemes. Arora (1999) and Khanna (1999) described the increased interdependence of buyers and suppliers have brought into focus the importance of quality. Lakhe and Mohanty (1994) based on their study identified four approaches for TQM implementation. These are development of a vision, policy promotion on quality, creating a total quality-oriented culture, and training and education.

Maheshwari and Zhao (1994) conducted a survey of 42 Indian company executives to examine quality-management practices in India. They found that the majority of the Indian companies are well aware of the modern quality management concepts and philosophies, and company executives believe that they are doing a good job of providing high-quality products or services to their customers. Sharma (1997) reported that many Indian organizations began to implement TQM programmes since 1991 onwards, by India still lacks effective TQM systems and application at the enterprise level. According to Malliga and Jayabalan (1999), 77% of the ISO 9000 surveyed organizations in India felt positive about quality awareness and TQM implementation. The country's product quality as a whole still needs improvement. Quality has been perceived as 6.2 on a scale of 0 to 10 in a recent survey carried

out by Business Today-IMC survey of consumers in 5 select cities of India (Business Today 2000).

According to kumar and Garg (2002) study in the Indian organizations, 75% of the automobile, 83% of poly, prod., 78% electronic and 33% institutions are following TQM. During their study they considered six main factors, which have a vital role in TQM implementation. These six factors are: (i) top management leadership and commitment, (ii) continuous improvement (Kaizen), (iii) customer focus and satisfaction, (iv) education and training, (v) statistical process control, and (vi) quality awards.

CONCLUSION

There is about 2.5 lach company sites and other organizational locations the world over Europe, USA, Australia, Latin America, Asia and Africa. Out of these, more than 50 percent are located in the West European countries like UK, Germany, France, Switzerland etc. A number of organizations through out the world such as some Japanese companies like Nippon Denso, Honda, Nissan, Toyota, Hitachi etc., the US companies such as Motorola, Hewlett-Packard, Xerox, IBN etc., European companies like Jaguar, British Airways, Mars etc., and Indian companies like Reliance, Philips, Tata, Maruti, BHEL, BEL. ITC etc. are the excellent business organizations of the world and many of these have won several national and international quality awards for the excellent performance. All are using quality as an accelerated way of improvement. Indian industry is facing stiff competition from rivals like china, Korea, and many other nations. Of late, Indian companies have demonstrated many successors on this front, such as winning Deming prizes. The crux of the issue is that whatever quality philosophy we follow, be it TQM, Six Sigma , ISO 9000, or something else, we must have a continuous zeal and serious intentions of improving the quality of our products and services.

In sum, business compulsion in a competitive environment is not merely good performance, but doing better than the competition. This performance standard is not static; it has to continually change in step with market dynamics. This situation is compelling industries to go for new strategies, strategies for sustained and superior performances. TQM is the outcome of the collective actions and efforts of all members within and outside the organization, who have a stake in the company's well being and performance.

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